

Open Access for the Australian Medical Librarian

Heather Morrison
Project Coordinator
BC Electronic Library Network
<http://eln.bc.ca>
heatherm@eln.bc.ca
778-782-7001
<http://poeticeconomics.blogspot.com>

Andrew Waller
Serials Librarian
University of Calgary Library
MLB 402B
2500 University Drive NW
Calgary, AB
T2N 1N4
waller@ucalgary.ca
(403) 220-8133 voice
(403) 284-2109 fax

Open Access for the Australian Medical Librarian

by Heather Morrison and Andrew Waller

Abstract

"An old tradition and a new technology have converged to make possible an unprecedented public good" (Budapest Open Access Initiative)¹. Recent events are transforming the possibility of this unprecedented public good into a reality, with medical literature leading the way. The Directory of Open Access Journals lists close to 3,200 fully open access, peer-reviewed scholarly journals as of February 2008. More than 400 of the journals in DOAJ are in the health sciences. DOAJ is growing rapidly, adding more than 1.5 titles per calendar day. PubMedCentral (PMC) is the world's largest open access archive, with well over a million items. An international network, PMC International, is envisioned, with copies of the whole archive around the world for preservation and security, as well as a local option for deposit. Watch for rapid growth of PMC as medical research funders, including the U.S. National Institutes of Health, Wellcome Trust, the U.K. Medical Research Council, and the Canadian Institutes of Health Research, among others, are requiring public or open access to the research they fund. There are implications, and leadership opportunities, for librarians in the open access environment.

Introduction

Open Access: A Definition

The Budapest Open Archives Initiative (BOAI) <http://www.soros.org/openaccess/> defines open access as "free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself"¹.

The only thing missing from the BOAI definition is that OA literature is freely available immediately on publication (as opposed to after a deliberate delay period or embargo; this is best referred to as free back issues, to avoid confusion). It is possible to make older literature openly accessible. What is important about the BOAI definition is that it makes clear that OA literature is free to *use*, not just to read.

The focus of the Open Access movement is the scholarly, peer-reviewed research articles, which authors have traditionally given away, although the concept can apply to other types of resources, such as theses, dissertations, grey literature, and books.

Some Reasons For Open Access

There are many reasons for supporting Open Access, including:

Access to research information

The results of research and other scholarly activities must be disseminated to be useful. If an article that reports the results of research is hidden behind some sort of toll ("Toll Access" or TA), i.e. it requires a subscription or pay-per-view to access. This limits the amount of dissemination to those libraries and users that can afford the subscription and/or pay-per-view costs, and are inclined to pay them. The difference in dissemination is illustrated by a substantial body of research showing that OA articles are cited more often (the OA impact advantage) ².

Access to taxpayer-funded information / Equity of access

Much of the research that is carried out in universities and elsewhere is funded using taxpayer dollars. It is argued that no user should have to pay again, either individually or via an institutional subscription, for content that they have already paid for via their taxes. In the United States, there is a strong push along these lines from organizations such as the Alliance for Taxpayer Access
<http://www.taxpayeraccess.org/>

In addition, there are strong arguments that the results of government-funded medical research, information that can affect people's lives, should be freely available to all, not just to those who can afford to pay. Open Access can help to make more of this vital material available to all who need it, regardless of means.

Facilitates evidence-based medicine

Increased access for the practicing professional facilitates the practice of evidence-based medicine, by making the evidence more accessible.

Author control

In the traditional world of scholarly journal publishing, the author has typically signed over all, or almost all, copyright to the publisher. In an Open Access environment, the author generally keeps the copyright and only grants the publisher the right to publish the article in that journal; all other rights are retained. Hence, in some ways, an author has more control in an OA situation

than in the traditional environment, for example to reuse their own work to distribute to their students.

Library costs

Another impetus behind OA relates to the cost of toll access. Here is the situation: Using tax dollars, scholars are conducting research and publishing their research in journals that require up-front payment in order to be accessed by users. Who is providing the payment? Libraries are, via frequently very expensive subscription costs with steep average increases; for example, U.S. titles increased 9% in 2006/07, non-U.S. titles 7.3%³. These prices have had dire effects on the budgets of academic libraries for many years. Open access eliminates this total dependence on these up-front costs for access, something that may help libraries deal with serial budget difficulties.

It should be stressed that this does not mean that Open Access content is free to produce nor does it necessarily mean that libraries are off the hook for that payment. OA advocates cannot be naïve about this; it costs to produce and distribute peer-reviewed scholarly material (though there are also ways to make the production cheaper).

The Main Tracks of Open Access

Generally speaking, there are two main tracks of Open Access: Author Self-Archiving and Open Access Publishing.

Author Self-Archiving

This involves authors (or a proxy) depositing a pre-print and/or a post-print of their articles in an Open Access Repository (OAR). OpenDOAR, a vetted list of open access repositories, currently lists more than 1,000 archives, including over 50 in Australia alone (<http://www.opendoar.org/>).

These repositories can be cross-searched, using tools such as OAIster <http://www.oaister.org/>, as a result of the Open Archives Initiative (OAI) <http://www.openarchives.org/> protocol for metadata harvesting. There are over 14.9 million items included in an OAIster search, and growth is dramatic³. Users can also easily retrieve articles in repositories using common search tools such as Google and Google Scholar. Having articles in OARs provides a measure of preservation, as well as access.

OARs can be institutional repositories (IR), which are designed to collect and preserve the digital scholarly output of a university or similar body, or they can be subject-based repositories.

The most important repository in the medical area is the subject repository, PubMedCentral, (PMC) <http://www.pubmedcentral.nih.gov/>. PMC was developed by the U.S. National Library of Medicine, fulfilling its dual roles of providing access to, and preservation of, medical literature. The U.S. PMC is the first of what is visioned as an international network of open access repositories for medicine, each a copy of the original as well as a site for depositing material. This initiative is called PMC International <http://www.pubmedcentral.nih.gov/about/pmci.html>.

UK-PMC is already up and running. Australian librarians might wish to promote the concept of an Australian PMC. This would provide a local option for self-archiving authors in Australia, and also ensure that a copy of the world's medical knowledge resides on Australian soil.

According to the publisher copyright policies and self-archiving page on the SHERPA RoMEO website, <http://www.sherpa.ac.uk/romeo.php> most journal publishers do allow authors to self-archive. It is important to note that many publishers place restrictions on self-archiving. In the medical area in particular, given the importance of PMC, it is important to note that some publishers permit self-archiving only in institutional, not disciplinary, repositories, or only on the author's own website, and not in a repository.

Open Access Publishing

Open Access publishing involves making articles open access in the process of publication. Some open access journals are new, while others have converted from a more traditional approach.

There has been a great deal of activity in open access publishing. The Directory of Open Access Journals (DOAJ) <http://www.doaj.org>, a librarian-vetted list of fully open access, peer-reviewed scholarly journals, currently lists nearly 3,200 titles, and has been adding titles at an average rate of at least 1.5 per calendar day (from December 2007 to March 2008, the rate has been over 3 titles per calendar day⁴). Over 400 of the DOAJ journals fall into a health sciences field.

BioMedCentral (BMC) <http://www.biomedcentral.com/>, one of the best known of the OA publishers in medicine, publishes around 175 OA titles. Other important OA publishers to be aware of include Public Library of Science (PLOS), Hindawi Publishing, Medknow Publications, and Bentham Open.

Traditional publishers are also entering the field, presenting either fully OA journals, such as Evidence-Based Complementary and Alternative Medicine <http://ecam.oxfordjournals.org/> from Oxford University Press.

Much of the discussion around Open Access publishing boils down to economics. How are quality OA publications created while still paying for the

processes of publication and peer review? There are numerous possible ways of doing this, ranging from advertising to support from libraries, institutions, government, or societies, to article processing fees.

Discussion has tended to focus on the article processing fee option, sometimes confused with OA per se. It is important to note that less than half of OA journals (47%) charge article processing fees⁵, and many non-OA journals do charge a variety of submission fees (e.g. page charges, illustration charges, etc.). In fact, up to about 20 years ago or so, some publishers charged authors completely for the costs of publication.

A key issue for libraries is, naturally, library support. Many libraries are choosing to support open access by providing free hosting and support services for their faculty's own publishing, often using the open source Open Journal Systems (OJS) as a platform <http://pkp.sfu.ca/?q=ojs>

Libraries can also support open access by paying article processing fees. If this option is of interest, it is important to consider "smart" support. That is, a traditional publisher charging subscription fees as well as optional fees for open choice might be double dipping. Before committing to supporting such a program, libraries should investigate. Oxford University Press is presenting a good role model, in some cases reducing library subscription fees in 2008 to reflect revenue from open choice uptake⁶.

Other things to watch for:

- be sure the open choice option meets the definition of open access (e.g., not just free to read but only from the publisher's website)
- the fees, which range from Hindawi's average of \$500 - \$800 US per article to BMC's \$1,500 or so to \$3,000 or more.

One option for libraries to consider is paying smaller amounts in full, but splitting the costs of higher fees. The Berkeley Research Impact Initiative is a pilot project of the Berkeley Library and Provost's office that appears to address the most pertinent elements of smart support for an article processing fee approach <http://www.lib.berkeley.edu/brii/>.

Some publishers charge a flat per-article fee; others have differential charges for different journals, or depending on whether or not the library is a subscriber or member.

Open Access Policy

Research Funders

The research funding community is leading in the development of Open Access policy, for several very good reasons. Open Access is the optimum method for disseminating the results of research that the agency has funded. As discussed above, there is substantial evidence that open access articles are cited more often. For the research funder, this means more research impact – more researchers to view the results and carry on the next steps; more real-world impact, particularly in an area like medicine, where expanding access enhances the ability of the practitioner to practice evidence-based medicine; and more visibility for the work of the funding agency per se, which can only help to ensure ongoing support for the work of the agency. It is not surprising, then, that research funders tend to be strongly in favour of Open Access.

U.S. National Institute of Health: Public Access Policy

The world's largest funder of medical research is the U.S. National Institute of Health (NIH), with a funding portfolio of \$29 billion U.S. annually. The NIH Public Access policy requires public access to the results of NIH-funded research, no more than 12 months after publication <http://publicaccess.nih.gov/>.

The NIH Public Access Policy first came into effect on May 2, 2005, as a request rather than a requirement, with the result of a dismal compliance rate of less than 4%. This example illustrates why open access policies must be a requirement for open access, not just a request. In April 2008, the NIH policy becomes a requirement. U.S. librarians are very busy helping faculty members prepare for implementation.

Wellcome Trust

The second largest medical research funder in the world is the U.K.-based Wellcome Trust. The Wellcome Trust was the first research funder to implement a truly strong open access policy, *Open and Unrestricted Access to the Outputs of Published Research* <http://www.wellcome.ac.uk/node3302.html>. Wellcome Trust grantees are required to deposit a copy of the peer-reviewed articles resulting from their funded research for open access in PubMedCentral (PMC) within 6 months of publication. The Wellcome Trust policy applies to all grants awarded since October 2005. Wellcome is working with publishers to pay article processing fees on behalf of their researchers.

U.K. Medical Research Council

Effective October 1, 2006, recipients of new funding awards are required to deposit peer-reviewed research results for open access in UK-PMC for open access at the earliest opportunity, and certainly within 6 months of publication

<http://www.mrc.ac.uk/PolicyGuidance/EthicsAndGovernance/OpenAccessPublishingandArchiving/MRC002546>

Canadian Institutes for Health Research (CIHR)

The Canadian Institutes for Health Research (CIHR) Policy on Access to Research Outputs <http://www.cihr-irsc.gc.ca/e/34846.html> came into effect in January 2008, calling for open access to CIHR-funded research results, and data, preferably immediately but no more than 6 months after publication.

There are many more open access policies, not all in the medical area. For a list of research funding agencies' open access policies, see SHERPA Juliet <http://www.sherpa.ac.uk/juliet/>.

Universities and other institutions are developing institutional open access policies; a list can be found at Registry of Open Access Repositories Material Archiving Policies (ROARMAP), at <http://www.eprints.org/openaccess/policysignup/>. This is an area at the beginning stages of what will be enormous growth in the near future. Recent developments include an open access policy from the Harvard Faculty of Arts and Sciences, important because it is a faculty-led initiative; and, a recent meeting of the European Universities Association where the more than 700 members from 46 countries unanimously committed to developing institutional open access policies⁷.

Conclusions

Open access is a major emerging trend in scholarship with significant opportunities for leadership for the medical librarian. Librarians have long been leaders in OA advocacy and educating faculty. There will be new roles for libraries, both academic and special, in building and filling institutional repositories, and some libraries are getting involved in publishing as well. There are also roles for libraries in finding solutions to the economics of open access, as well as potentially expanded roles in information literacy and research-level reference assistance, as the resources available to our users expand through open access.

References

1. Budapest Open Archives Initiative [homepage on the Internet]. [Feb 14,2002]. <http://www.soros.org/openaccess/read.shtml>.
2. Hitchcock S. The effect of open access and downloads ('hits') on

citation impact: a bibliography of studies. The Open Citation Project: Reference Linking and Citation Analysis for Open Archives.

<http://opcit.eprints.org/oacitation-biblio.html>.

3. Van Orsdel, Lee C. Van & Kathleen Born. Periodicals Price Survey 2007: Serial Wars. Library Journal, 4/15/2007

<http://www.libraryjournal.com/article/CA6431958.html>

4. Morrison, H. Dramatic Growth of Open Access Series [quarterly series]

<http://poeticeconomics.blogspot.com/2006/08/dramatic-growth-of-open-access-series.html>

5. Kaufmann-Wills. The Facts About Open Access. Free to download from

http://www.alpsp.org/ngen_public/default.asp?ID=200

6. Oxford Journals Update. Issue 2, Winter 2007/2008

7. Rentier, Bernard, Recteur, Université de Liège. L'EUA se lance dans l'OA. Pour une université ouverte et interactive. Weblog.

<http://recteur.blogs.ulg.ac.be/?p=171>

Note:

This article is a revised and updated version of Heather Morrison and Andrew Waller's *Open Access for the Medical Librarian*, Journal of the Canadian Health Libraries Association, Vol 27 Number 3, Summer 2006.

<http://pubs.nrc-cnrc.gc.ca/jchla/jchla3-06.html>

Further Resources

For further information and links to key resources, please see Peter Suber's Open Access Overview:

<http://www.earlham.edu/~peters/fos/overview.htm>

For daily news, see Open Access News:

<http://www.earlham.edu/~peters/fos/fosblog.html>

¹ Budapest Open Archives Initiative [homepage on the Internet]. [updated 2002 Feb 14; cited 2006 Jun 30]. Available from: <http://www.soros.org/openaccess/read.shtml>.

² Eysenbach G. Citation advantage of open access articles. PLOS Biol [serial on the Internet]. 2006 May [cited 2006 Jun 30]; 4(5). Available from: <http://biology.plosjournals.org/perlserv/?request=get-document&doi=10%2E1371%2Fjournal%2Epbio%2E0040157>.

Eysenbach G. The open access advantage. J Med Internet Res [serial on the Internet]. 2006 [cited 2006 Jun 30]; 8(2). Available from: <http://www.jmir.org/2006/2/e8/>.