

Distribution of Medical Research Articles on the World Wide Web

Kevin T. Kavanagh, MD, FACS

ABSTRACT. Ninety-eight percent of 51 polled medical editors felt that published research articles should be available to the public on the World Wide Web at no charge, after a mean time from publication of 1.4 years for viewing and 1.9 years for printing. Public libraries or other government institutions could be allowed to assume the responsibility of housing and distributing the electronically stored archived material, analogous to their role with printed material, lifting the financial burden from the publishing companies. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2003 by The Haworth Press, Inc. All rights reserved.]*

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An emerging method of publishing medical research articles is by distribution on the World Wide Web. This method allows shorter time between article submission and publication, and may virtually eliminate article backlog. It will also allow the publication of longer articles and the accommodation of large color illustrations. But the great advantage will be the incorporation of sound and video. In the future, articles may contain active Web links, allowing the reader to click on a reference and instantly be sent to the text of the referenced article. Imagine

Kevin T. Kavanagh is Clinical Associate Professor, Department of Surgery, Division of Otolaryngology, University of Kentucky.

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while researching a subject or taking an online CME course to be able to learn more about a subject by merely clicking on the reference to display a full-text version of the article. This will not only provide a great savings in time and resources but will also allow the reader to critically review the published information. This will undoubtedly lead to more carefully written articles and an increase in the validity of the published information, which will not only benefit research but also patient care.

One disadvantage of electronic publication is the requirement for maintenance and although publication costs are small, there will be an ongoing cost of housing the material. Despite this, electronic publication is rapidly growing and becoming more prevalent.

One of the biggest concerns regarding electronic publication is the Control of Information. By copyright law, Title 17 US Code, libraries and archives are authorized to furnish a photocopy or other reproduction, provided that the copy is used for private study, scholarship or research. However, with electronic publication this information is often housed securely on a server with viewing charges up to \$25 per article. This often represents a new revenue source for the journal, since old archived articles seldom generated significant reprint income.

One may argue that the information is available in a library. However, some articles are now published only on the Web and free full-text Web posting would give patients and rural and third world physicians instant access to potentially life-saving information.

As stated by George Lundberg,¹ "Medical and scientific research and public health articles should be freely available to all after proper peer review and editing as a public trust. That is in effect what Hippocrates said, and for that matter, in the US most research has already been paid for by tax dollars, either through NIH or Medicare funded physicians. To require taxpayers who already own the data to pay a second time for a subscription makes no sense. . . ." As of the date of this publication, 970 medical journals have already embraced this policy (<http://www.freemedicaljournals.com/>).

For further guidance on this issue, the editors of the *World Association of Medical Editors* were polled regarding their journal's policies on article distribution. One hundred thirty-six US and Canadian editors from 105 journals were polled from March through June of 2001 in two US mailings and two e-mailings with a 40% survey response rate (see Tables 1 and 2).

A surprising result of the survey is that approximately 40% of US editors reported "No Policy" regarding author distribution of articles and approximately 35% of US editors reported "No Policy" regarding li-

library distribution of articles. There was little difference between distribution by fax, mail or posting on the Internet. The lack of policy regarding library distribution of articles via mail or fax was surprising since a policy is set forth by US copyright law. Editors from other countries reported more lenient article distribution policies than editors from the US and Canada (see Table 1).

TABLE 1. Journal Policy on Distribution of Medical Articles over the World Wide Web

USA and CANADA	Number	Yes	No	No Policy
Permission for Pub Med to Post Abstract	54	76%	6%	19%
Permission for Author to Post Abstract on Web Site	52	19%	33%	48%
Authors				
To Send Articles by Mail	52	35%	27%	38%
To Send Articles by Fax	52	35%	27%	38%
To Send Articles by E-Mail	52	23%	31%	46%
To Post on Web View Only	49	14%	43%	43%
To Post on Web for Printing	51	20%	41%	39%
Libraries				
To Send Articles by Mail	50	42%	26%	32%
To Send Articles by Fax	50	40%	28%	32%
To Send Articles by E-Mail	50	28%	30%	42%
To Post on Web View Only	48	21%	42%	38%
To Post on Web for Printing	50	24%	42%	34%
Other Countries				
Permission for Pub Med to Post Abstract	25	72%	0%	28%
Permission for Author to Post Abstract on Web Site	25	48%	16%	36%
Authors				
To Send Articles by Mail	25	64%	20%	16%
To Send Articles by Fax	25	64%	20%	16%
To Send Articles by E-Mail	25	60%	24%	16%
To Post on Web View Only	25	36%	32%	32%
To Post on Web for Printing	25	36%	36%	28%
Libraries				
To Send Articles by Mail	25	64%	24%	12%
To Send Articles by Fax	25	64%	24%	12%
To Send Articles by E-Mail	25	52%	24%	24%
To Post on Web View Only	25	40%	24%	36%
To Post on Web For Printing	25	36%	32%	32%

The editor's opinion was also sought regarding the author's posting of the author's medical articles on the Web or freely linking to the full-text article on the journal's Website (either option would be an affirmative answer) (see Table 2).

Of the 51 editors who responded, 98% felt a journal should, after a certain period of time, allow authors to post or link to their articles on the Internet, with an average of 1.4 years for viewing only and 1.9 years for article printing.

The above must be weighed against the journal's economic health. If publishers never charged for what they published, they may go out of existence. Journals not only format and distribute information, but also serve to peer review the work and are a vital component in the assurance of quality medical information we use to treat our patients.

In summary, medical research articles are being published more and more frequently on the World Wide Web. The most common method is for journals to publish on the Web after publication in print and to charge for viewing of articles. This method of distribution represents a new source of income generated largely from archived articles. If this method persists, we will miss a golden opportunity for the augmentation of distribution of medical information for research and patient care. The free access to Web-based full-text medical articles must be weighted against

TABLE 2. Survey Data Regarding Authors Posting or Linking to Free Full-Text Versions of Their Research Papers (See <<http://www.entusa.com/survey/>> for Full Survey Results and Instrument)

Authors to post or link to full-text versions of their articles on the Web—Read only format, printing disabled, downloading inhibited

	No Opinion	Never	Immediately	1 yr	2 yrs	3 yrs	5 yrs	10 yrs	Average
US	3	1	11	13	3	8	4	0	
Canada		1	6	4					
Total	3	2	17	17	3	8	4	0	1.4

Authors to post or link to full-text versions of their articles on the Web—Printing and downloading enabled

	No Opinion	Never	Immediately	1 yr	2 yrs	3 yrs	5 yrs	10 yrs	Average
US	3	1	7	13	3	8	6	1	
Canada		1	5	3	1	1			
Total	3	2	12	16	4	9	6	1	1.9

the economic health of the journal. Posting on the Web after a certain time period from publication in print or posting in a read only format (article printing is disabled) may be alternatives which some journals use to implement a distribution policy. Public libraries or other government institutions could be allowed to assume the responsibility of housing and distributing the electronically stored archived material, analogous to their role with printed material, lifting the financial burden from the publishing companies.

In the future, printed material bought and housed in libraries may be phased out in favor of electronic format. If this happens, we are in danger of developing a system where large for-profit publishing corporations will have exclusive ownership to massive quantities of medical research and information to which access will be rented on a yearly basis. In the end, the marketplace and the author's desire for wide dissemination of his/her medical work may be the driving force in adoption of a free-distribution policy over the World Wide Web.

REFERENCE

1. George Lundberg: Editor of *Medscape General Medicine*, Personal communication.