Technicalities™

Information Forum for the Technical Services Professional

Reality Check

Journal Selection at the National Library of Medicine: A New Process for Challenging Times

By Jennifer L. Marill

Jennifer L. Marill

Is a picture worth a thousand words? In this case, perhaps not a thousand, but it does set the stage for this issue's "Reality Check" column. One of the most important functions the National Library of Medicine (NLM) performs is journal selection for the NLM collection. Library staff, most in the Technical Services Division's Selection Unit, reviews thousands of biomedical and related journals every year, supporting numerous NLM programs and services such as MEDLINE/PubMed and PubMed Central (PMC). The selection process includes an examination of a journal's scientific and editorial quality as well as a publisher's credentials and the transparency of its operations. The photo of the vacant lot included with this column is taken from the result of

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Dollars and Sense

Is There a Safe Way To Take Risks?

By Sheila S. Intner

Sheila S. Intner

In a previous column, I mentioned that part of the job of technical services or collection development managers is designing goals and objectives, and a natural consequence of designing goals and objectives is taking risks. For example, speeding up the time between the arrival of a book and its appearance on the shelves (one of the examples I used in the last column) means limiting cataloging time, but that could result in an increase in errors in catalog records.

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This issue contains no editorial to provide space for book reviews. **From the Editor's Desk** *will return in the next issue.*

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Reality Check

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a Google map search for the address of a publisher that applied to PMC last summer.

The NLM Collection

In 1865 John Shaw Billings, then an assistant to the Surgeon General, was given responsibility for building and managing the growing collection of medical books and journals of the Army Medical Library in Washington, D.C., a precursor of the NLM. Although he collected all types of medical publications, Billings concentrated on acquiring and maintaining complete files of American medical journals in his vision to develop a National Medical Library. In 1956, the U.S. Congress renamed the institution the National Library of Medicine and directed it "to assist the advancement of medical and related sciences and to aid the dissemination and exchange of scientific and other information important to the progress of medicine and to the public health."[1] Central to this mission is the development of a collection that supports contemporary biomedical and health care research and practice as well as future scholarship. NLM is responsible for acquiring biomedical literature in any format or language, and from any country deemed appropriate, to the fulfillment of the NLM mission.

Today the NLM journal collection provides critical health information to millions of people in the U.S. and around the world. The Library supports access to the collection in a number of ways, including onsite for users in the NLM reading rooms, via inter-library loan, and online via PMC, NLM's free full-text archive of biomedical and life sciences journal literature. Selection for the NLM journal collection is governed by the NLM *Collection Development Manual* (*CDM*), which provides a framework for the selection of biomedical materials.[2] The *CDM* serves primarily as a working document for NLM selectors and other staff, but is also of interest to a wider community of users including the staffs of other health science and research libraries. The *CDM* defines the range of subjects to be acquired and the extent of the Library's collecting effort within these subjects. It also provides guidance for the selection of formats and literature types such as audiovisual materials, consumer health information, ephemera, grey literature, journals, manuscripts, prints and photographs, and statistical works.

NLM Journal Selection

The Library's first collecting priority is scientific or scholarly journals that report original research. The intent is to assemble a comprehensive collection of the world's most significant research journals in all subjects collected at NLM, from all countries and in any language. NLM also collects clinical and practice journals and substantive review journals, which summarize and sometimes analyze recent research in a field and have become an important means of

biomedical communication. Collecting emphasis for these journals is on those areas of interest to U.S. health professionals; however, NLM also collects works from other countries that document diverse approaches to clinical practice or that cover health issues unique to a particular region.

When selecting scholarly and scientific journals, NLM expects, as a benchmark, at least 20 percent of the articles in recent issues of the journal to be "in scope," i.e., to fall within the subject collection parameters outlined in the CDM. The Library may make exceptions to this rule to ensure that the collection provides sufficient geographic heterogeneity. NLM also expects a journal to demonstrate sustainability and a commitment to ongoing publication before it can be considered for the collection. As such, MEDLINE/PubMed and PMC set minimum requirements on the volume of content that must be available in final form before reviewing a journal's application.

NLM selectors evaluate a number of factors when reviewing journals for inclusion in the collection. In addition to subject scope, they place strong emphasis on the scientific quality of the primary peer-reviewed content of a journal. The assessment of scientific quality encompasses clarity of the research methods described, clearly stated study aims and objectives, well-described study participant selection and statistical methods, and logically presented results supported by data.

NLM also examines the journal's commitment to integrity in publishing practices and overall editorial quality. A journal is expected to state its editorial policies on peer review, disclose any conflict of interest, and clearly indicate when research involves experiments on human and animal subjects. The journal should demonstrate a commitment to scholarly publishing standards and practices such as those outlined by:

- Committee on Publication Ethics (COPE)
- International Committee of Medical Journal Editors (ICMJE)
- Council of Scientific Editors (CSE)
- National Information Standards Organization (NISO)

A journal should conform to commonly accepted editorial practices and demonstrate professional quality in presentation and format by following standard conventions of grammar, tables, figures, etc., and clearly displaying the authors' affiliations.

NLM also looks for information about the editorial board members and editor-in-chief. The editorial board is expected to possess expertise appropriate for the subject matter of the journal, demonstrated by publication history as well as teaching and research experience. Names and affiliations should be fully listed.

Journal Publishing Trends and Impact on NLM

Publishing trends have had substantial impact on many facets of libraries' work. These trends include the ease and subsequent growth of electronic publishing, open access publishing, new publishing technologies, publisher mergers, the rise of interdisciplinary research, the impact of social media, interest in access to underlying research data, and the "mega-journal," a single journal covering a wide range of subjects and offering what might have constituted many new journals as a single title. In particular, NLM is concerned about the large number of new publishers with no publishing history and their motivations for entering the publishing field. These publishers range from inexperienced to deliberately deceptive. Some provide outlets for researchers from developing countries. However, some of these publishers deliberately engage in unprofessional practices.

Similar to other research libraries, these trends have affected NLM in numerous ways. NLM has seen not only an overall growth of journal publications to be considered for the general collection, but a substantial uptick of applications to PMC. To initially address these publishing trends NLM adopted more rigorous journal selection guidelines, which were added to the NLM *Collection Development Manual* in October 2012.[3] Many of these guidelines are described above. More fundamentally, though, these trends have resulted in a re-examination of the journal selection process at NLM.

A Process for Evaluating New Publishers

To increase the efficiency of its selection process, the Library has chosen to move some selection decisions "upstream" from individual title selection. In the past, selectors were generally familiar with long established publishers and the quality of their products. Due to the number of new journal titles produced by unfamiliar publishers, selectors are spending a great deal of time researching these new titles, often duplicating effort and reviewing the same publisher information. To address this issue, NLM

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staff now completes a review of a new publisher before reviewing any of its journal titles for PMC or MEDLINE/PubMed. Selection based on publisher is expected to result in downstream savings: a decision to not collect anything from a particular publisher will decrease the number of new publications needing review.

As part of the PMC journal application process, publishers must answer a standard set of questions about company location, registration, management team, publishing credentials and experience, names and affiliations of individuals responsible for the scientific quality of publications, mechanisms for ensuring the quality of published articles, editorial policies, and the degree to which the journals comply with ICMJE uniform requirements for manuscripts. NLM requires that all this information be available at a public location, primarily on the publisher's website. If the information supplied to NLM is incomplete or unclear, NLM will request clarification once. If additional clarification is needed NLM will stop its evaluation and will not consider an application from this publisher for an extended period of time (currently three years).

Evaluating Business Operations

Once NLM has received a complete response to the publisher questions, the first step in NLM's publisher evaluation process is to review the transparency and validity of the publisher's business operations. NLM examines the transparency of the company location, registration, and Web presence. These checks are to ensure that the provided address matches the business registration and the domain registration data matches the corporate registration information. This sort of checking can reveal incongruities like the address of the empty lot pictured with this column, as well as more serious problems. The Library then reviews information about ownership and management of the publisher, noting if biographies of the owners and managers are listed on the website and if there is sufficient detail to determine whether they have a substantial record of experience in scientific publishing.

NLM also is very concerned about misleading business practices, such as providing inaccurate information about where publications are indexed. We have documented numerous occasions where publishers state that their publications are indexed in MEDLINE/PubMed but this is not the case. Evidence of mass solicitations for editorial board members or for authors is also checked. We note social media posts from scholars who are keeping track of their spam e-mail from journals.

NLM expects a publisher to be a member of, or clearly state they subscribe to the principles of, internationally recognized STM publishing organizations such as the ones listed above (e.g., COPE, ICMJE).

Evaluating Scientific Publishing Knowledge

If the validity of the publisher's business operations can be established, NLM next assesses the publisher's policies and practices, or more generally their "professional knowledge." NLM expects the peer review policy and manuscript processing and/or publishing fees to be clearly posted. Potential authors should be able to easily find this information prior to submitting their manuscripts for review. Copyright, licensing, or open access terms should be clearly described and indicated on the journal website. Policies for handling potential conflicts of interest of editors and authors need to be stated. Retraction, correction, and research misconduct policies also must be clearly outlined. Less important, but still relevant, are the disclosure of advertising policies. NLM also checks if marketing activities appear appropriate, well targeted, and unobtrusive.

NLM then examines the publisher's publishing record, including the number of journals a publisher produces and general quality of a sample of those titles. Due to the effort and expense of processing a new title for the collection, NLM also checks that a publisher's journals are currently maintained with recent content. For specialized journals, NLM looks for roughly 30-50 papers per year, and even more papers for broader journals. Articles should be identified with accepted standards such as citations with unique article IDs.

Conclusion

As the Library develops this new publisher evaluation process, we anticipate the need for re-reviews if we become aware of concerns about a publisher that is already known to the Library and has materials in the NLM collection. We plan to develop a list of situations and adverse events

that justify a new review of a publisher previously deemed "collectable."

As the publishing landscape continues to evolve, NLM may need to look to other methods for evaluating journals for the NLM collection. What will not change, however, is the value NLM places on the quality of journal content and on the credibility and experience of those who produce the content. As stated in the NLM *Collection Development Manual*, materials –and especially quality research journals—are collected with the intent to improve health, to further health care thought and practice, to support life sciences research, and to deliver biomedical information to the widest possible audience.

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References and Note

1. National Library of Medicine, 42 U.S.C. § 286 (2011), www.law.cornell.edu/uscode/text/42/286 (accessed May 10, 2016).
2. National Library of Medicine, *Collection Development Manual of the National Library of Medicine*, 4th ed. (Bethesda, MD: National Library of Medicine, 2004), www.nlm.nih.gov/tsd/acquisitions/cdm (accessed May 10, 2016). Note that various sections have been revised since 2004; these are indicated by revision date in the manual.
3. National Library of Medicine, *Collection Development Manual*, "Journals," www.nlm.nih.gov/tsd/acquisitions/cdm/formats29.html (accessed May 10, 2016).

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Dollars and Sense...

Is There a Safe Way To Take Risks?

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Another example also used in the last column was enriching the mathematics collection, which might mean having to downsize another subject collection and prompt complaints by patrons using those materials about the lack of up-to-date resources. Risky business is about as foreign to librarians as shouting in the reading room, so how can librarian-managers be expected to welcome risk and take big chances by making important changes in their departments?

Current Trends Call for Risk-Taking

The cover of the March/April issue of *American Libraries*, that stalwart voice of the American Library Association, shouts "Libraries Transform" in a comic strip style balloon. In my little desktop dictionary, transformation is defined as change—change in the appearance, form, nature, or condition of something.[1] Similarly, transition (or, if you prefer the fancier case, transitioning) is defined as the process of changing from one form, state, style, or place to another.[2] In a new book on technical services, American University's Director of Technical Services Christine Korytnyk Dulaney writes, "The rise of the network as a key paradigm in librarianship is a strategic inflection point that requires transformational change for technical services to stay relevant and successful."[3] Dulaney recognizes the risk involved, stating and restating that transformational change involves permitting mistakes to be made

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